

What is claimed is:

1. A contactor comprising:

an insulating housing having an open end and
an enclosed end wall spaced apart from said open end,
5 said housing unit defining a cavity, said cavity
including longitudinally disposed channels;

said end wall including a plurality of high
current terminals protruding through said end wall, each
said high current terminal defining an internally located
10 contact pad within said cavity;

said end wall including at least one low
current terminal protruding through said end wall and
defining coil contact means within said cavity;

a solenoid assembly proximate to said open end
15 of said housing unit, said solenoid assembly comprising:

a bobbin,

a coil wound on said bobbin, said bobbin
comprising a pair of bobbin ends with at least one
radially extending projection from at least one of said
20 bobbin ends, each projection including a receptacle for
receiving a connection means, said connection means
connected to said coil contact means,

coupling means to connect said coil to said
connection means, said projection receiving said coupling
25 means,

said receptacle nested in one of said
longitudinal channels,

an axially movable armature projecting from
said bobbin terminating in a contact disc, said contact
30 disc being in a bridgeable relationship with said contact
pads; and

a cover fastened to said open end of said
housing, said cover securing said coil assembly within
said housing unit.

35 2. The contactor according to claim 1 wherein

said internal contact pad of each said high current terminal comprises a crowned surface.

3. The contactor according to claim 1 wherein each said high current terminal further comprises an external knurled surface.

4. The contactor according to claim 1 wherein said low current terminal further comprises an external knurled surface.

5. The contactor according to claim 1 wherein said connecting means comprises a spring.

6. The contactor according to claim 5 wherein said contact means comprises a post, said spring mating with said post.

7. The contactor according to claim 1, wherein said cover further comprises a mounting bracket.

8. A contactor comprising:
an insulating housing having an open end and an enclosed end wall;

said end wall including at least two high current terminals protruding through said end wall, each said high current terminal defining a crowned internal contact pad, said end wall including at least one low current terminal protruding through said end wall and forming a post within said cavity;

a coil assembly proximate to said open end of housing, said coil assembly comprising:

a bobbin,
a coil wound on said bobbin,
means for connecting said post to said coil,
an axially movable armature projecting from said bobbin terminating in a contact disc, said contact disc being in a bridgeable relationship with said contact pads; and

a cover fastened to said open end of said housing, said cover securing said coil assembly within said housing.

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9. The contactor according to claim 8 wherein said high current terminal comprises an external knurled surface.

5 10. The contactor according to claim 8 further comprising a coil housing surrounding said coil, said coil housing formed of two separate identical sections arranged symmetrically.

10 11. The contactor according to claim 8 wherein said armature further comprises a plunger, a plunger rod, and a plunger washer, said plunger, plunger rod and plunger washer formed as individual components.

15 12. The contactor according to claim 8 further comprising a headspring, said headspring mated onto an end of said coil assembly and biased against said housing unit end wall.

13. The contactor according to claim 12 further comprising a well located in said end wall, said well receiving said headspring.

20 14. The contactor according to claim 8, wherein said cover further comprises a mounting bracket.

15 15. A contactor comprising:
an insulating housing having an open end and an enclosed end wall spaced apart from said open end, said housing unit defining a cavity, said cavity including longitudinally disposed channels;

30 said end wall including a pair of high current terminals protruding through said end wall, each of said high current terminals defining an internally located contact pad within said cavity, said end wall including at least one low current terminal protruding through said end wall and forming contact means within said cavity;

a coil assembly proximate to said open end of said housing unit, said coil assembly comprising:

35 a bobbin,
a coil wound on said bobbin, said bobbin

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comprising a pair of bobbin ends with at least one radially extending projection from at least one of said bobbin ends, each projection including a receptacle for receiving connection means, said connection means
5 connected to said contact means,

coupling means to connect said coil to said connection means, said projection receiving said coupling means,

said receptacle nested in one of said
10 longitudinal channels,

an axially movable armature projecting from said bobbin terminating in a contact disc, said contact disc being in a bridgeable relationship with said contact pads; and

15 a cover fastened to said open end of said housing, said cover securing said coil assembly within said housing.

16. The contactor of claim 15 comprising a plurality of projections and wherein one of said
20 projections is connected to said connection means and another of said projections is connected to a second connection means, said second connection means connected to said cover.

17. The contactor according to claim 16
25 wherein each of said projections is nested in one of said longitudinal channels.

18. The contactor according to claim 17 wherein said first connection means and said second connection means comprise springs.

30 19. The contactor of claim 18 wherein said coupling means further comprises a conductive blade, said conductive blade mounted on said projection.

20. The contactor of claim 15 comprising a plurality of projections and wherein one of said
35 projections is connected to said connection means and

another of said projections is connected to a second connection means, said second connection means connected to a second low current terminal.

21. The contactor of claim 20 wherein one of
5 said projections is nested in one of said longitudinal channels, and the other of said projections is nested in an oppositely disposed longitudinal groove.

22. The contactor of claim 15 wherein said
10 coupling means further comprises a conductive blade, said conductive blade mounted on said flange.

23. The contactor according to claim 15
further comprising a coil housing surrounding said coil, said coil housing formed of two separate substantially identical sections arranged symmetrically.

15 24. The contactor according to claim 15, wherein said cover further comprises a mounting bracket.